**Ch. 24 notes: Comparing 2 means: 2 sample t-interval and test**

**2-sample T-test**

HYPOTHESES:

CONDITIONS:

MECHANICS:

CONCLUSION:

**Example:** Resting pulse rates for a random sample of 26 smokers had a mean of 80 beats per minute (bpm) and a

standard deviation of 5 bpm. Among 32 randomly chosen nonsmokers, the mean and standard deviation were 74 and 6 bpm. Both sets of data were roughly symmetric and had no outliers. Is there evidence of a difference in mean pulse rate between smokers and non-smokers? How big?

**2-sample t-Interval**

CONDITIONS:

MECHANICS:

CONCLUSION:

**Example:** Since we rejected our Ho, complete the interval for our example on smokers above.

**Example 2:** Here are the saturated fat content (in grams) for several pizzas sold by two national chains. Do the two pizza chains have significantly different mean saturated fat contents?

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Brand D** | 17 | 12 | 10 | 8 | 8 | 10 | 10 | 5 | 16 | 16 |
| 8 | 12 | 15 | 7 | 11 | 11 | 13 | 13 | 11 | 12 |
| **Brand PJ** | 6 | 7 | 11 | 9 | 4 | 4 | 7 | 9 |  |  |
| 11 | 3 | 4 | 5 | 8 | 5 | 5 |  |  |  |

Book Problems: p. 579 #2, 3, 11, 14, 27, 36